

CLAIMS

1. (Currently Amended) A method comprising:

receiving, by a media player, a request to play a first recorded audio file and a second audio file;

selecting a first data sample and a second data sample in the first audio file;

calculating an average output value of the first two data samples in the first audio file;

if the average value in the first audio file exceeds a threshold value, marking the second data sample as an effective start position associated with the first audio file and marking the first data sample as silent;

if the average value does not exceed the threshold value:

selecting subsequent data samples in the first audio file and updating the average value of all selected data samples until the average value exceeds a threshold value;

~~progressively analyzing, by the media player, consecutive data samples of the first audio file to determine a data sample wherein an output threshold is reached to identify:~~

~~an effective start of audio position associated with the first audio file;~~

and

~~an effective start of fade-out position associated with the first audio~~
~~file;~~

selecting the last two data samples in the first audio file;

calculating an average value of the last two data samples in the first
audio file;

if the average value exceeds a threshold value, marking the second data
sample as an effective start of fade-out position associated with the first audio file
and marking the first data sample as silent;

if the average value does not exceed the threshold value:

selecting subsequent data samples in the first audio file and
updating the average value of all selected data samples until the average
value exceeds a threshold value;

~~progressively analyzing consecutive data samples of the second~~
~~audio file to determine a data sample wherein an output threshold is~~
~~reached to identify an effective audio start position associated with the~~
~~second audio file;~~

selecting the first two data samples in the second audio file;

calculating an average value of the first two data samples in the
second audio file;

if the average value exceeds a threshold value, marking the second data
sample as an effective start position associated with the second audio file and
marking the first data sample as silent;

if the average value does not exceed the threshold value:

selecting subsequent data samples in the second audio file and updating the average value of all selected data samples until the average value exceeds a threshold value;

playing the first audio file beginning at the effective start position associated with the first audio file;

upon reaching the effective start of fade-out position associated with the first audio file:

fading-out playback of the first audio file; and

while fading-out playback of the first audio file, simultaneously fading-in playback of the second audio file beginning at the effective start position associated with the second audio file.

2. (Previously Presented) A method as recited in claim 1 wherein the fade-out position associated with the first audio file is located a predetermined time ahead of an effective end position associated with the first audio file.

3. (Previously Presented) A method as recited in claim 1 wherein the effective start position associated with the first audio file differs from an actual start position of the first audio file.

4. (Original) A method as recited in claim 1 further comprising fading-out playback of the second audio file upon reaching a fade-out position associated with the second audio file.

5. (Previously Presented) A method as recited in claim 1 wherein the effective start position associated with the first audio file and the fade-out position associated with the first audio file are stored in a media library.

6. (Previously Presented) A method as recited in claim 1 wherein the effective start position associated with the first audio file and the fade-out position associated with the first audio file are stored in the first audio file.

7. (Original) One or more computer-readable memories containing a computer program that is executable by a processor to perform the method recited in claim 1.

8. (Previously Presented) A method comprising:

Receiving, by an audio cross-fade engine, a request to analyze an audio file;

selecting the first two data samples in the audio file;

calculating an average value of the first two data samples in the audio file;

if the average value exceeds a threshold value, marking the second data sample as an effective start position associated with the audio file and marking the first data sample as silent;

if the average value does not exceed the threshold value:

selecting subsequent data samples in the audio file and updating the average value of all selected data samples until the average value exceeds a threshold value;

marking a current data sample as an effective start position associated with the audio file; and

marking previously selected data samples as silent.

9. (Original) A method as recited in claim 8 wherein the average value of the data samples is calculated based on volume levels in the audio file.

10. (Original) A method as recited in claim 8 further comprising saving the effective start position associated with the audio file to a media library.

11. (Original) A method as recited in claim 8 further comprising saving the effective start position associated with the audio file to a storage device that stores the audio file.

12. (Original) A method as recited in claim 8 further comprising saving information regarding data samples marked as silent to a storage device that stores the audio file.

13. (Original) A method as recited in claim 8 wherein the effective start position is applied during subsequent playback of the audio file.

14. (Original) A method as recited in claim 8 wherein the effective start position is applied during subsequent playback of the audio file to determine a point at which the audio file begins to fade-in as a previous audio file fades out.

15. (Original) One or more computer-readable memories containing a computer program that is executable by a processor to perform the method recited in claim 8.

16. (Previously Presented) A method comprising:
receiving, by an audio cross-fade engine, a request to analyze an audio file;

selecting the last two data samples in the audio file;

calculating an average value of the last two data samples in the audio file;

if the average value exceeds a threshold value, marking the last data sample as an effective end position associated with the audio file and marking the other selected data sample as silent;

if the average value does not exceed the threshold value:

selecting previous data samples in the audio file and updating the average value of all selected data samples until the average value exceeds a threshold value;

marking a current data sample as an effective end position associated with the audio file; and

marking previously selected data samples as silent.

17. (Original) A method as recited in claim 16 wherein the method is performed by a media player application.

18. (Original) A method as recited in claim 16 further comprising saving the effective end position associated with the audio file in a media library.

19. (Original) A method as recited in claim 16 further comprising saving the effective end position associated with the audio file to a storage device that stores the audio file.

20. (Original) A method as recited in claim 16 wherein the average value of the data samples is calculated based on volume levels in the audio file.

21. (Original) A method as recited in claim 16 further comprising saving information regarding data samples marked as silent to a storage device that stores the audio file.

22. (Original) A method as recited in claim 16 wherein the effective end position is applied during subsequent playback of the audio file.

23. (Original) A method as recited in claim 16 wherein the effective end position is applied during subsequent playback of the audio file to determine a point at which the audio file begins to fade-out.

24. (Original) One or more computer-readable memories containing a computer program that is executable by a processor to perform the method recited in claim 16.

25. (Currently Amended) An apparatus comprising:
a cross-fade parameter calculator configured to perform acts comprising:

~~progressively analyze consecutive data samples of a first audio file to
determine a data sample wherein a output threshold is reached;~~

select a first and a second data sample in a first audio file;

calculate an average output value of the first and second data
samples in the first audio file;

if the average value exceeds a threshold value, mark the second
data sample as an effective start position associated with the first audio file
and mark the first data sample as silent;

if the average value does not exceed the threshold value:

select subsequent data samples in the first audio file and update the
average value of all selected data samples until the average value
exceeds a threshold value; and

~~calculate at least one fade-out parameter associated with the first audio
file;~~

select the last two data samples in the first audio file;

calculate an average value of the last two data samples in the first
audio file;

if the average value exceeds a threshold value, mark the second
data sample as an effective start of fade-out position associated with the
first audio file and mark the first data sample as silent;

if the average value does not exceed the threshold value:

select subsequent data samples in the first audio file and update the average value of all selected data samples until the average value exceeds a threshold value;

a media library coupled to the cross-fade parameter calculator, the media library configured to store fade-out parameters associated with a plurality of audio files, wherein the fade-out parameters are stored separate from the audio files; and

a cross-fader coupled to the media library, the cross-fader configured to apply fade-out parameters during playback of audio files.

26. (Previously Presented) An apparatus as recited in claim 25 wherein the cross-fade parameter calculator is further configured to calculate an effective start position associated with the first audio file.

27. (Previously Presented) An apparatus as recited in claim 25 wherein the cross-fade parameter calculator is further configured to calculate an effective end position associated with the first audio file.

28. (Previously Presented) An apparatus as recited in claim 25 wherein the cross-fader is further configured to retrieve fade-out parameters from the media library.

29. (Currently Amended) An apparatus comprising:

means for receiving a request to play a first audio file followed by a second audio file;

~~means for progressively analyzing consecutive data samples of the first audio file to determine a data sample wherein an output threshold is reached to identify a first effective start position and a fade-out position associated with the first audio file, and~~

means for selecting the first two data samples in the first audio file;

means for calculating an average value of the first two data samples in the first audio file;

if the average value exceeds a threshold value, marking the second data sample as an effective start position associated with the first audio file and marking the first data sample as silent;

if the average value does not exceed the threshold value:

selecting subsequent data samples in the first audio file and updating the average value of all selected data samples until the average value exceeds a threshold value;

means for selecting the last two data samples in the first audio file;

means for calculating an average value of the last two data samples in the first audio file;

if the average value exceeds a threshold value, marking the second data sample as an effective start of fade-out position—associated with the first audio file and marking the first data sample as silent;

if the average value does not exceed the threshold value:

selecting subsequent data samples in the first audio file and updating the average value of all selected data samples until the average value exceeds a threshold value;

means for selecting the first two data samples in the second audio file;

means for calculating an average value of the first two data samples in the second audio file;

if the average value exceeds a threshold value, marking the second data sample as an effective start position associated with the second audio file and marking the first data sample as silent;

if the average value does not exceed the threshold value:

means for selecting subsequent data samples in the second audio file and updating the average value of all selected data samples until the average value exceeds a threshold value;

means for playing the first audio file beginning at the first effective start position, wherein upon reaching the fade-out position associated with the first audio file, the means for playing fades-out playback of the first audio file and begins playing the second audio file beginning at the second effective start position.

30. (Original) An apparatus as recited in claim 29 wherein the fade-out position is located a predetermined time prior to an effective end position associated with the first audio file.

31. (Original) An apparatus as recited in claim 29 wherein the means for playing fades-out playback of the second audio file upon reaching a fade-out position associated with the second audio file.

32. (Original) An apparatus as recited in claim 29 wherein the start position associated with the first audio file, the fade-out position associated with the first audio file, and the second effective start position associated with the second audio file are retrieved from a media library.

33. (Original) An apparatus as recited in claim 29 wherein the start position associated with the first audio file and the fade-out position associated with the first audio file are retrieved from the first audio file.

34. (Currently Amended) One or more computer-readable storage media having stored there on a computer program that, when executed by one or more processors, causes the one or more processors to perform a method comprising:

receiving by the one or more processors a request to play a sequence of audio files;

~~progressively analyzing consecutive data samples in the sequence of audio files, yielding data to calculate an effective start position and a fade-out position associated with the first audio file;~~

~~progressively analyzing consecutive data samples of a second audio file in the sequence of audio files, yielding data to calculate an effective start position associated with a second audio file, wherein the second audio file is adjacent and subsequent to the first audio file within the sequence of audio files;~~

selecting the first two data samples in the first audio file;

calculating an average value of the first two data samples in the first audio file;

if the average value exceeds a threshold value, marking the second data sample as an effective start position associated with the first audio file and marking the first data sample as silent;

if the average value does not exceed the threshold value:

selecting subsequent data samples in the first audio file and updating the average value of all selected data samples until the average value exceeds a threshold value;

selecting the last two data samples in the first audio file;

calculating an average value of the last two data samples in the first audio

file;

if the average value exceeds a threshold value, marking the second data sample as an effective start of fade-out position—associated with the first audio file and marking the first data sample as silent;

if the average value does not exceed the threshold value:

selecting subsequent data samples in the first audio file and updating the average value of all selected data samples until the average value exceeds a threshold value;

selecting the first two data samples in the second audio file;

calculating an average value of the first two data samples in the second audio file;

if the average value exceeds a threshold value, marking the second data sample as an effective start position associated with the second audio file and marking the first data sample as silent;

if the average value does not exceed the threshold value:

selecting subsequent data samples in the second audio file and updating the average value of all selected data samples until the average value exceeds a threshold value;

playing the first audio file beginning at the effective start position associated with the first audio file;

upon reaching the fade-out position associated with the first audio file:

fading-out playback of the first audio file; and

playing the second audio file beginning at the effective start position associated with the second audio file.

35. (Previously Presented) One or more computer-readable storage media as recited in claim 34 wherein the fade-out position associated with the first audio file is calculated by subtracting a predetermined time period from an effective end position associated with the first audio file.

36. (Previously Presented) One or more computer-readable storage media as recited in claim 34 wherein the one or more processors further fade-out playback of the second audio file upon reaching a fade-out position associated with the second audio file.

37. (Previously Presented) One or more computer-readable storage media as recited in claim 34 wherein the one or more processors further calculate effective start positions and fade-out positions associated with each audio file in the sequence of audio files.